IN THE CLAIMS:

1. (PREVIOUSLY PRESENTED) An intermediate network device for use within a computer network having a server configured to provide one or more data streams to a client, each stream having a corresponding bandwidth, the network device comprising:

means for determining network traffic characteristics sufficient to identify a stream from the server to the client;

a packet classification engine for snooping on Real Time Streaming Protocol (RTSP) response messages for determining the bandwidth of the stream; and

a resource reservation protocol (RSVP) transmitter proxy configured to reserve resources within the computer network on behalf of the server for allocation to the stream.

2. (ORIGINAL) The intermediate network device of claim 1 wherein the RSVP transmitter proxy is configured to generate and send one or more RSVP Path messages on behalf of the server, the one or more RSVP Path messages containing the network traffic characteristics and the bandwidth of the stream.

3. (ORIGINAL) The intermediate network device of claim 2 wherein the RSVP transmitter proxy is configured to terminate RSVP Reservation (Resv) messages that are sent to the server.

4. (ORIGINAL) The intermediate network device of claim 3 wherein the RSVP transmitter proxy is configured to generate and send one or more RSVP Path Teardown (PathTear) messages on behalf of the server for releasing the reserved resources allocated to the stream.

5-8 (CANCELLED).

1   9. (PREVIOUSLY PRESENTED) The intermediate network device of claim 1 wherein

2   the packet classification engine is configured to extract the bandwidth of the stream from

3   one or more messages whose contents are organized at least in part in accordance with

4   the Session Description Protocol (SDP) specification standard.

1   10. (ORIGINAL) The intermediate network device of claim 9 further comprising a ses-

2   sion manager configured to store the network traffic characteristics and bandwidth of the

3   stream.

1   11. (ORIGINAL) The intermediate network device of claim 10 wherein the stream has an

2   RTSP state and the session manager includes one or more state machine engines config-

3   ured to maintain the RTSP state of the stream.

1   12. (ORIGINAL) The intermediate network device of claim 2 wherein

2   the client has a network layer address and a transport layer port for use in receiv-

3   ing the stream from the server,

4   the server has a network layer address and a transport layer port for use in sending

5   the stream to the client, and

6   the network traffic characteristics include the client's network layer address and

7   transport layer port and the server's network layer address and transport layer port.

1   13. (ORIGINAL) The intermediate network device of claim 12 wherein

2   the stream uses a given transport layer protocol, and

3   the network traffic characteristics include the given transport layer protocol.

1   14. (ORIGINAL) The intermediate network device of claim 13 wherein the RSVP Path

2   messages generated and sent by the RSVP transmitter proxy on behalf of the server in-

3   clude a session object containing the client's network layer address and transport layer

4   port and the transport layer protocol associated with the stream.

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1   15. (ORIGINAL) The intermediate network device of claim 14 wherein the RSVP Path

2   message includes a sender template object containing the server's network layer address

3   and transport layer port associated with the stream.

1   16. (ORIGINAL) The intermediate network device of claim 15 wherein the RSVP Path

2   message includes a sender Tspec object containing the bandwidth of the stream.

1   17. (CURRENTLY AMENDED) An intermediate network device for use within a com-

2   puter network having a server configured to provide one or more data streams to a client,

3   each stream having a corresponding bandwidth, the intermediate network device com-

4   prising:

5   means for determining traffic characteristics sufficiently to identify a stream from

6   the server to the client;

7   means for intercepting RTSP Describe Response messages sent from the server to

8   the client and for determining the bandwidth of the stream from a field of the RTSP De-

9   scribe Response messages;

10   a resource reservation protocol (RSVP) transmitter proxy configured to reserve

11   resources within the computer network on behalf of the server for allocation to the stream

12   and to generate and send one of more RSVP Path messages on behalf of the server, the

13   one or more RSVP Path messages containing the network traffic characteristics and the

14   bandwidth of the stream,; and

15   means for obtaining a differentiated services codepoint (DSCP) value that is

16   based on the bandwidth of the stream.

1   18. (ORIGINAL) The intermediate network device of claim 17 wherein the RSVP trans-

2   mitter proxy is configured to load the DSCP into the RSVP Path message generated and

3   sent on behalf of the server.

1   19. (ORIGINAL) The intermediate network device of claim 18 wherein the RSVP Path

2   message includes a DCLASS object containing the DSCP.

1   20. (CANCELLED)

1   21. (CANCELLED)

1   22. (CURRENTLY AMENDED) A method for operating a router, comprising:

2   receiving a Real Time Streaming Protocol (RTSP) message from a client, the

3   message directed to a server, the client message requesting that the server begin sending a

4   traffic flow to the client;

5   receiving a RTSP response message from the server, the response message re-

6   sponding to the message from the client;

7   examining the RTSP response message to determine a bandwidth for the traffic

8   flow to the client;

9   transmitting, in response to the RTSP response message, a resource reservation

10 request message (RSVP request message) to the client, the RSVP message establishing a

11 path to the client;

12   receiving a RSVP reply-Resv message from the client, the RSVP reply-Resv mes-

13 sage reserving resources for the requested traffic flow;

14   receiving a data message of the traffic flow from the server; and

15   transmitting the data message of the traffic flow with a resource reservation indi-

16 cia in the data message, the resource reservation indicia to direct the data message to

17 travel along the reserved resources.

1   23. (PREVIOUSLY PRESENTED) The method of claim 22, further comprising:

2   reading a message received by the router from a computer network in order to de-

3   termine if the message is from a client, and if the message requests that the server send a

4   traffic flow to the client.

24. (PREVIOUSLY PRESENTED) The method of claim 22, further comprising:

reading a message received by the router from the server in order to determine if the message is a response to a client request for a traffic flow.

25. (PREVIOUSLY PRESENTED) The method of claim 22, further comprising:

reading from messages received by the router parameters of a traffic flow, the traffic flow requested by the client for the server to transmit to the client.

26. (PREVIOUSLY PRESENTED) A method for operating a router, comprising:

receiving a first message from a client, the first message directed to a server to request a traffic flow from the server to the client;

determining a sequence number of the first message;

reading a second message from the server in order to determine if the message is a response to the first message, and determining if the second message is a response to the first message by checking a sequence number in the second message;

reading from the first message and the second message at least one parameter of the traffic flow, the traffic flow requested by the client for the server to transmit to the client;

writing the at least one parameter into a resource reservation request message (RSVP request message);

transmitting, in response to the second message, the RSVP request message to the client, the RSVP message establishing a path to the client;

receiving a RSVP reply message from the client, the RSVP reply message reserving resources for the requested traffic flow;

receiving a data message of the traffic flow from the server; and

transmitting the data message of the traffic flow with a resource reservation indicia in the data message, the resource reservation indicia to direct the data message to travel along the reserved resources.

1   27. (PREVIOUSLY PRESENTED) The method of claim 22, further comprising:

2   using a Resource reSerVation (RSVP) protocol to learn the contents of messages

3   received by the router.

1   28. (PREVIOUSLY PRESENTED) The method of claim 22, further comprising:

2   connecting the router one hop away from the server;

3   receiving first messages by the router, the first messages originating from com-

4   puters connected to the Internet and directed to the server; and

5   receiving second messages by the router, the second messages originating from

6   the server and directed to clients connected to the Internet.

1   29. (CURRENTLY AMENDED) A router, comprising:

2   means for receiving a <u>Real Time Streaming Protocol (RTSP)</u> message from a cli-

3   ent, the message directed to a server, the client message requesting that the server begin

4   sending a traffic flow to the client;

5   means for receiving a <u>RTSP</u> response message from the server, the response mes-

6   sage responding to the message from the client;

7   <u>examining RTSP response message to determine a bandwidth for the traffic flow</u>

8   <u>to the client;</u>

9   means for transmitting, in response to the <u>RTSP response</u> message, a resource res-

10   ervation request message (RSVP request message) to the client, the RSVP message estab-

11   lishing a path to the client;

12   means for receiving a RSVP<u>Resv</u> reply message from the client, the RSVP <u>Rescv</u>

13   reply message reserving resources for the requested traffic flow;

14   means for receiving a data message of the traffic flow from the server; and

15   means for transmitting the data message of the traffic flow with a resource reser-

16   vation indicia in the data message, the resource reservation indicia to direct the data mes-

17   sage to travel along the reserved resources.

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1   30. (PREVIOUSLY PRESENTED) The router of claim 29, further comprising:

2   means for reading a message received by the router from a computer network in

3   order to determine if the message is from a client, and if the message requests that the

4   server send a traffic flow to the client.

1   31. (PREVIOUSLY PRESENTED) The router of claim 29, further comprising:

2   means for reading a message received by the router from the server in order to

3   determine if the message is a response to a client request for a traffic flow.

1   32. (PREVIOUSLY PRESENTED) The router of claim 29, further comprising:

2   means for reading from messages received by the router parameters of a traffic

3   flow, the traffic flow requested by the client for the server to transmit to the client.

1   33. (PREVIOUSLY PRESENTED) A router, comprising:

2   means for receiving a first message from a client, the first message directed to a

3   server to request a traffic flow from the server to the client;

4   means for determining a sequence number of the first message;

5   means for reading a second message from the server in order to determine if the

6   message is a response to the first message, and determining if the second message is a

7   response to the first message by checking a sequence number in the second message;

8   means for reading from the first message and the second message at least one pa-

9   rameter of the traffic flow, the traffic flow requested by the client for the server to trans-

10   mit to the client;

11   means for writing the at least one parameter into a resource reservation request

12   message (RSVP request message);

13   means for transmitting, in response to the message the RSVP request message to

14   the client, the RSVP message establishing a path to the client;

15   means for receiving a RSVP reply message from the client, the RSVP reply mes-

16 sage reserving resources for the requested traffic flow;

17   means for receiving a data message of the traffic flow from the server; and

18   means for transmitting the data message of the traffic flow with a resource reser-

19 vation indicia in the data message, the resource reservation indicia to direct the data mes-

20 sage to travel along the reserved resources.

21   34. (CURRENTLY AMENDED) The router of claim 22 29, further comprising:

22   means for using a Resource reSerVation (RSVP) protocol to learn the contents of

23   messages received by the router.

1   35. (PREVIOUSLY PRESENTED) The method of claim 29, further comprising:

2   means for connecting the router one hop away from the server;

3   means for receiving first messages by the router, the first messages originating

4 from computers connected to the Internet and directed to the server; and

5   means for receiving second messages by the router, the second messages originat-

6 ing from the server and directed to clients connected to the Internet.

1   36. (PREVIOUSLY PRESENTED) A method for operating a router; comprising:

2   receiving a first message from a client, the first message directed to a server to re-

3 quest a traffic flow stream from the server to the client;

4   receiving a second message from the server, and determining that the second mes-

5 sage is a response to the first message;

6   reading characteristics from the first message and the second message to identify

7 the stream from the server to the client;

8   snooping the second message to determine a bandwidth of the stream; and

9   reserving resources within a computer network on behalf of the server for alloca-

10 tion to the stream.

37. (PREVIOUSLY PRESENTED) The method of claim 36, further comprising:

    determining a sequence number of the first message; and

    checking a sequence number in the second message to determine the second message is the response to the first message.

38. (PREVIOUSLY PRESENTED) The method of claim 36, further comprising:

    defining the first message as a Real Time Streaming Protocol (RTSP) request

message.

39. (PREVIOUSLY PRESENTED) The method of claim 36, further comprising:

    defining the second message as an RTSP response message.

40. (PREVIOUSLY PRESENTED) A router; comprising:

    means for receiving a first message from a client, the first message directed to a

server to request a traffic flow stream from the server to the client;

    means for receiving a second message from the server, and determining that the

second message is a response to the first message;

    means for reading characteristics from the first message and the second message

to identify the stream from the server to the client;

    means for snooping the second message to determine a bandwidth of the stream;

and

    means for reserving resources within a computer network on behalf of the server

for allocation to the stream.

41. (PREVIOUSLY PRESENTED) The router of claim 40, further comprising:

    means for determining a sequence number of the first message; and

    means for checking a sequence number in the second message to determine the

second message is the response to the first message.

1   42. (PREVIOUSLY PRESENTED) The router of claim 40, further comprising:

2   means for defining the first message as a Real Time Streaming Protocol (RTSP)

3   request message.

1   43. (PREVIOUSLY PRESENTED) The router of claim 40, further comprising:

2   means for defining the second message as an RTSP response message.

1   44. (PREVIOUSLY PRESENTED) A router; comprising:

2   a packet frame receiver to receive a first message from a client, the first message

3   directed to a server to request a traffic flow stream from the server to the client;

4   the packet frame receiver further configured to receive a second message from the

5   server;

6   a traffic scheduler configured to determine that the second message is a response

7   to the first message, and to read characteristics from the first message and the second

8   message to identify the stream from the server to the client;

9   a packet classification engine for snooping the second message to determine a

10   bandwidth of the stream; and

11   a resource reservation protocol (RSVP) transmitter proxy configured to reserve

12   resources within a computer network on behalf of the server for allocation to the stream.

1   45. (PREVIOUSLY PRESENTED) The router of claim 44, further comprising:

2   the traffic scheduler further configured to determine a sequence number of the

3   first message, and to check a sequence number in the second message to determine the

4   second message is the response to the first message.

1   46. (PREVIOUSLY PRESENTED) The router of claim 44, further comprising:

2   the first message is further defined as a Real Time Streaming Protocol (RTSP)

3   request message.

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47. (PREVIOUSLY PRESENTED) The router of claim 44, further comprising:

    the second message is further defined as an RTSP response message.

48. (PREVIOUSLY PRESENTED) A computer readable media, comprising:

    said computer readable media having instructions written thereon for execution by a router for the method of,

    receiving a first message from a client, the first message directed to a server to request a traffic flow stream from the server to the client;

    receiving a second message from the server, and determining that the second message is a response to the first message;

    reading characteristics from the first message and the second message to identify the stream from the server to the client;

    snooping the second message to determine a bandwidth of the stream; and

    reserving resources within a computer network on behalf of the server for allocation to the stream.

49. (PREVIOUSLY PRESENTED) Electromagnetic signals propagating on a computer network, comprising:

    said electromagnetic signals carrying instructions for executing on a router the method of,

    receiving a first message from a client, the first message directed to a server to request a traffic flow stream from the server to the client;

    receiving a second message from the server, and determining that the second message is a response to the first message;

    reading characteristics from the first message and the second message to identify the stream from the server to the client;

    snooping the second message to determine a bandwidth of the stream; and

    reserving resources within a computer network on behalf of the server for allocation to the stream.